

Raw & Test/Dosing Materials Characterization Definitions

Prior to use in studies, both Raw and subsequently derived Test/Dosing materials will be fully characterized for morphology and mineralogy.

They differ as follows:

- **Raw LA USGS (Date)—Material collected from the Libby mine and prepared by USGS that contains the full distribution of particle sizes (no separation performed)**
- **Test/Dosing LA USGS (Date)—Raw material that has been put through a separation process to produce a portion of the particle distribution (e.g., rat respirable fraction of the particle distribution).**

LA = Libby Amphibole

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Raw & Test/Dosing Materials Characterization Pilot Phase—USGS 2000

NHEERL

USGS

Raw LA USGS
2000

Fiber
Separation
Piloting

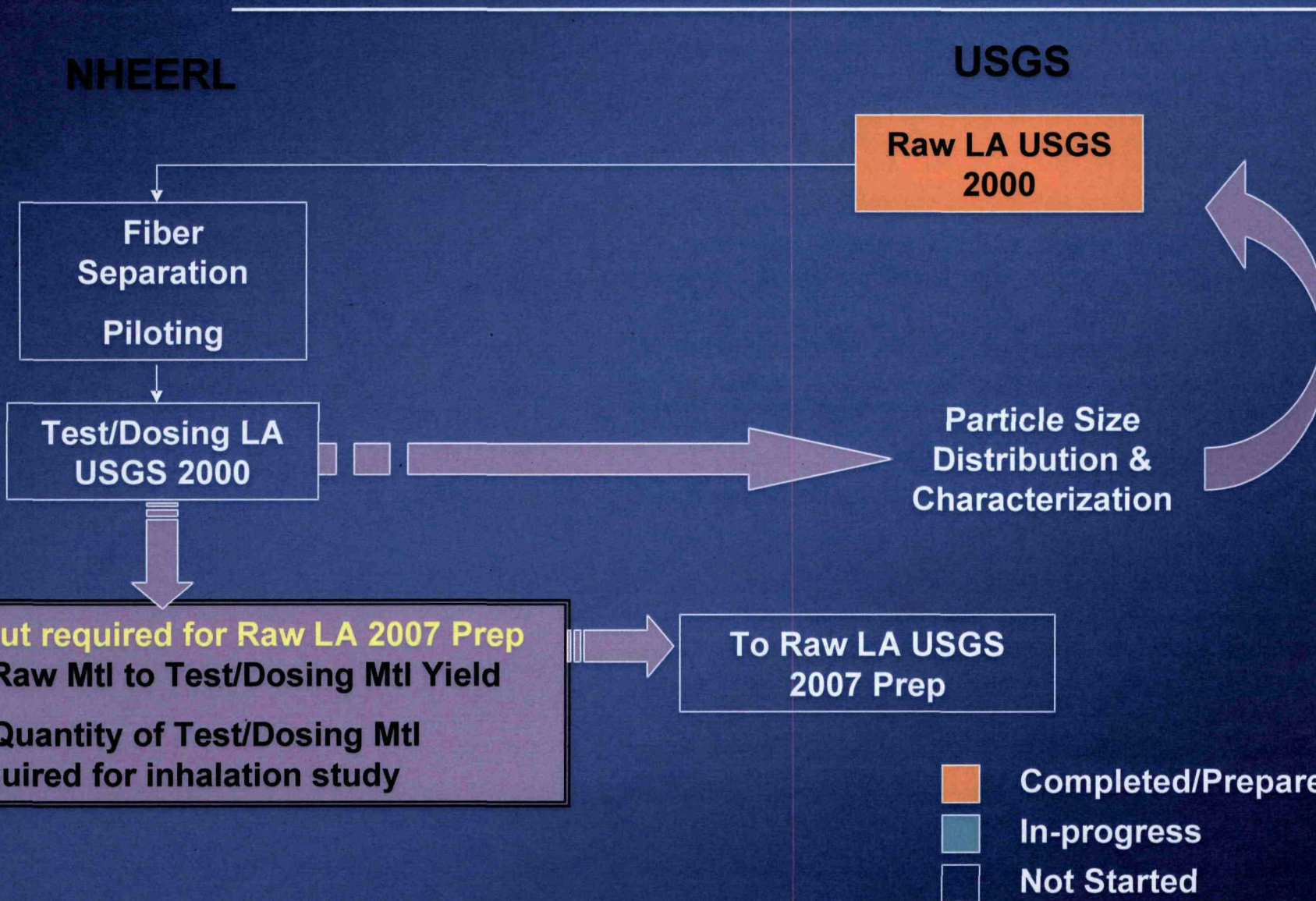
Test/Dosing LA
USGS 2000

Particle Size
Distribution &
Characterization

Input required for Raw LA 2007 Prep
1) Raw Mtl to Test/Dosing Mtl Yield
2) Quantity of Test/Dosing Mtl
required for inhalation study

To Raw LA USGS
2007 Prep

Completed/Prepared
In-progress
Not Started



Raw & Test/Dosing Materials Characterization Full-Scale—USGS 2007

NHEERL

USGS

From Pilot Separation: Raw
Mtl to Test/Dosing Mtl Yield

Raw LA USGS
2007

Fiber
Separation
Full-scale

Test/Dosing LA
USGS 2007

Raw LA USGS
Collection

Raw LA USGS
Prep
(Dry/Grind/Mix)

Raw LA USGS
Characterization

Test/Dosing LA
USGS 2007
Characterization

